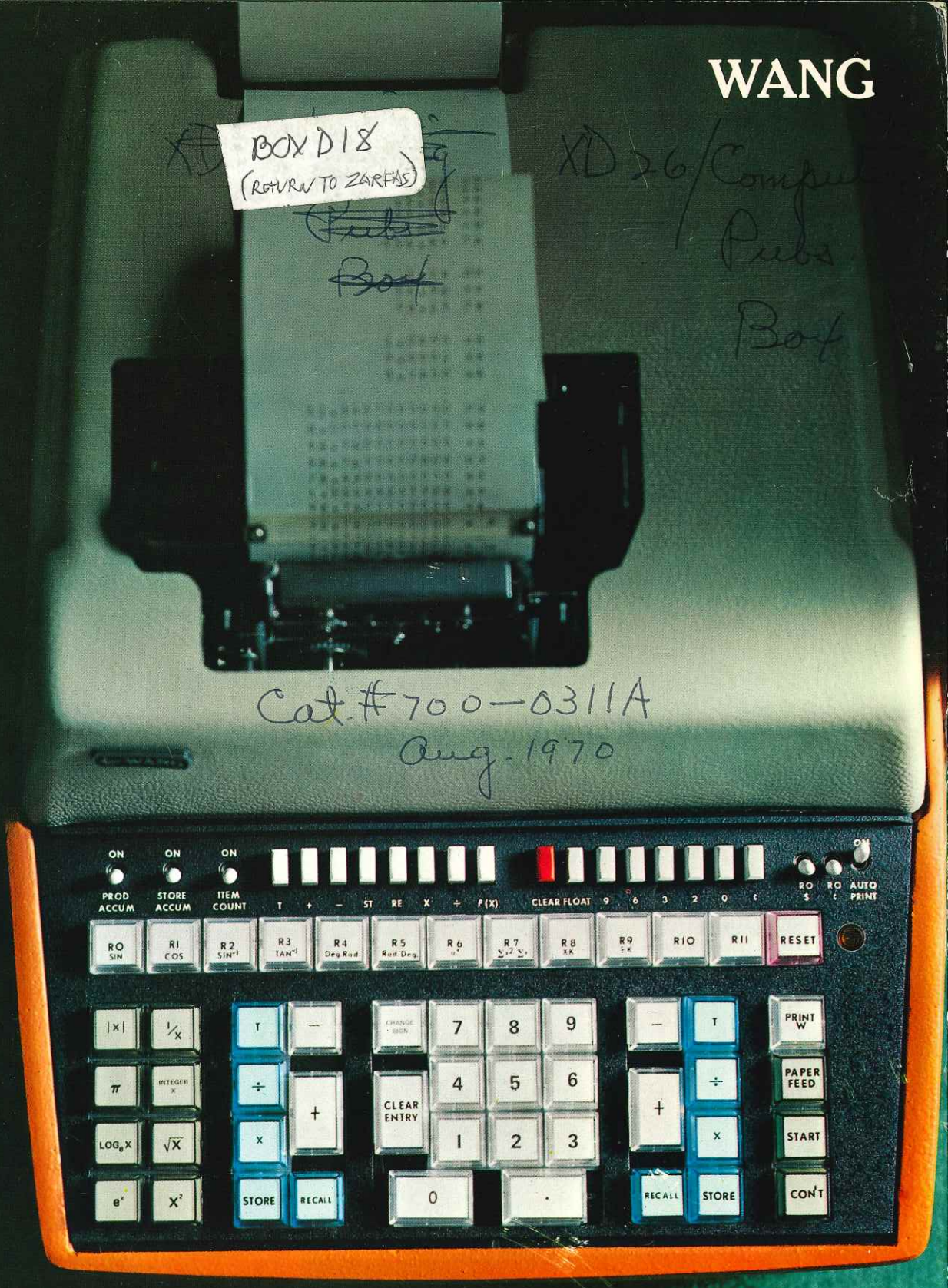
series 100

WANG



more than just a calculator...

because you need more than just a calculator

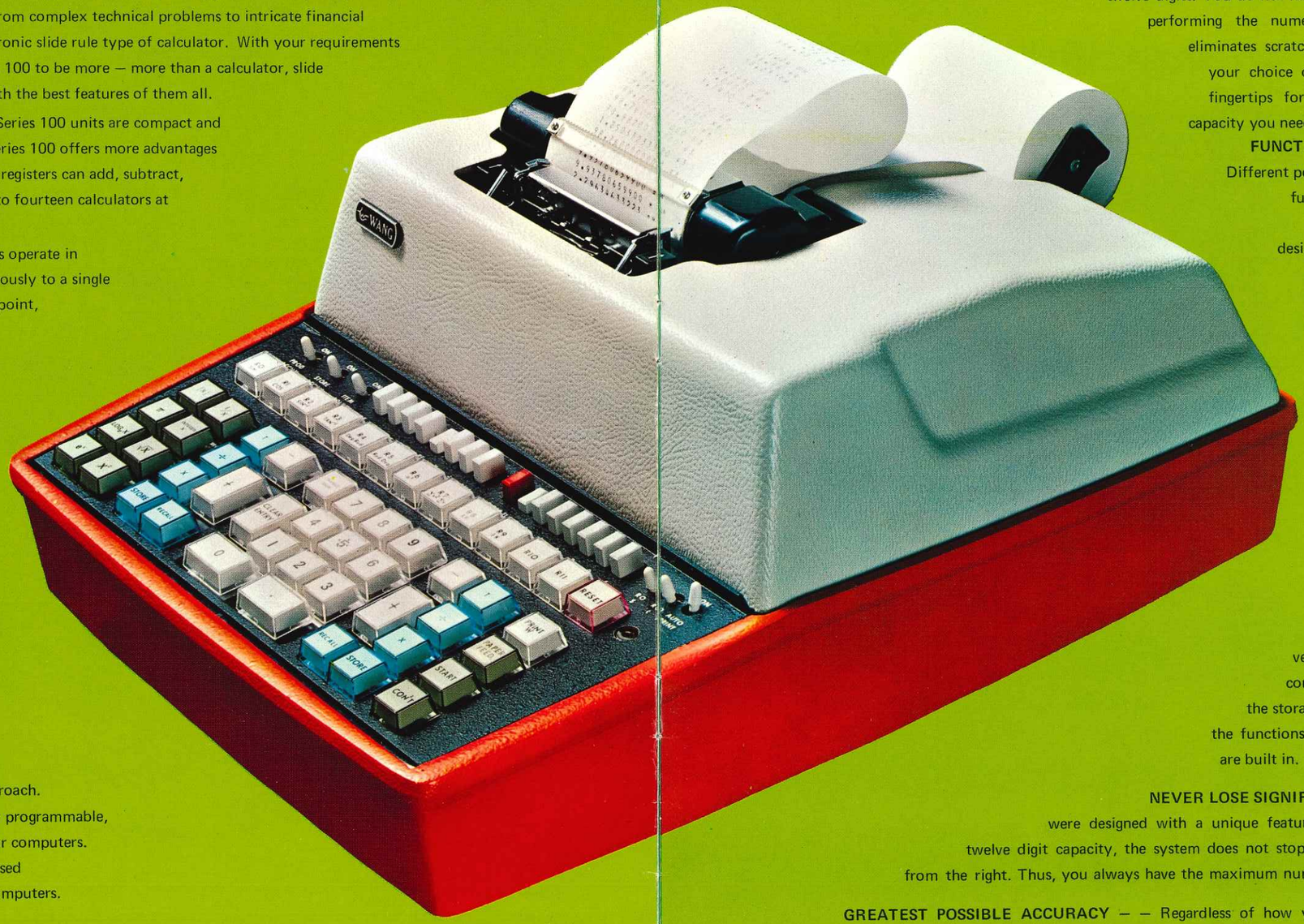
As an engineer, scientist, statistician or any other type of technical person, you must frequently make decisions based on analysis of factual data. Your duties, ranging from complex technical problems to intricate financial responsibilities, require more than just an electronic slide rule type of calculator. With your requirements in mind, Wang Laboratories designed the Series 100 to be more – more than a calculator, slide rule, adding machine or mini-computer, but with the best features of them all.

Like other electronic calculators, the Wang Series 100 units are compact and attractive. But the similarity ends there. The Series 100 offers more advantages than any other calculator, each of the multiple registers can add, subtract, multiply and divide. You can literally have up to fourteen calculators at your fingertips.

Like a slide rule, Wang Series 100 calculators operate in logarithms, but Series 100's respond instantaneously to a single key touch, automatically position the decimal point, provide twelve digit accuracy, and have memories.

Like an adding machine, Wang Series 100's can enter data with an implied two decimal places, total, subtotal, and round off dollars and cents – – capabilities you need for bidding, budgeting, funding, estimating, etc. Wang Series 100 calculators have memories so you can do a proration with up to fourteen items and never re-enter data. Wang's twelve digit capacity enables you to work up to $9,999,999,999.99 (that's capacity, not cost) and at electronic speeds conventional adding machines can't approach.

Like a computer, Wang Series 100's are fully programmable, but without a complicated language required for computers. And Wang 100's have keys for the commonly used functions that necessitate a program on mini-computers.



Wang Series 100 calculators are more than just a calculator, because Wang determined that you need more than just a calculator and designed this series of instruments to fit your requirements.

A few of the benefits found only with the WANG Series 100

MINIMUM DATA MANIPULATION – – Every register of a Series 100 is a complete calculator in itself – – capable of storing, recalling, adding, subtracting, multiplying, and dividing numbers of up to twelve digits. You do not have to store and recall numbers repeatedly while performing the numerous side calculations. This saves time and eliminates scratch pad work and re-entering of data. You have your choice of either six or fourteen such registers at your fingertips for instant use giving you the problem solving capacity you need.

FUNCTIONS YOU NEED, NOT JUST GET – – Different people performing different tasks require different functions. So Wang designed the Series 100 with a variety of optional features. To begin with, we designed two versions, one for statistical applications with single keystroke results for $\sqrt{X}$, X^2, 1/X and integer X; another version for general scientific and technical applications which includes the statistical functions and adds $\log_e X$, e^x, and $|X|$ – all available at the touch of a key. If you need certain other functions like sin, cos, arc sin and arc tan, you can add them. You can further calculate degrees to radians, radians to degrees, a^x, ΣX^2, ΣX, ΣN, multiply-constant and divide-constant. These options are available with the six and fourteen register scientific models respectively. On all statistical versions, you can add ΣX^2, ΣX, ΣN, multiply-constant and divide-constant. A simple key converts the storage registers to special function keys. But you add the functions as you need them, not buy them because they are built in.

NEVER LOSE SIGNIFICANT DIGITS – – Wang Series 100 calculators were designed with a unique feature called underflow. If you should exceed the twelve digit capacity, the system does not stop. Instead, a Series 100 will drop decimal places from the right. Thus, you always have the maximum number of significant digits in your printed results.

GREATEST POSSIBLE ACCURACY – – Regardless of how you set the decimal selector, the memory of a Series 100 always operates in floating mode. Even though you may desire only two decimal places in your result, the answer is accurate to a full twelve digits. And by switching the instrument to floating mode you can obtain all twelve digits at any time.

WANG

Product, Entry Accumulators and Item Counter for automatic summations and calculations. Number of items, number of units and cost — calculated and stored as fast as you can enter numbers.

Lock down keys for storage and arithmetic functions in registers. Totally eliminates recalling numbers for further calculations thus saving steps, time, and reducing error possibility.

Converts the storage register keys to special function keys.

Decimal selection keys enable you to specify the number of decimal places in the answers, assuring the maximum number of significant figures.

Converts a Series 100 to an adding machine with implied two decimal data entry.

Clears the contents of all registers with a single key touch.

Roundoff keys, essential for budget work, cost analysis, proposals, bids or balancing your checkbook.

Four or twelve additional storage registers that act as calculators. No data manipulation when you can calculate in storage without recalling numbers. And optionally you can have specific registers act as special function keys or registers.

Indicator lamp will glow to assure you that your input data is being processed.

For engineers and scientists, a built-in electronic slide rule. Comes complete with adjacent statistical keys, eliminating both slide rule and side calculations.

Programmer and printer keys, conveniently located on the keyboard but out of the way enough to assure no interference with calculations.

All the functions needed for statistical work available at your fingertips. Available without accompanying log keys for statisticians.

A complete adding and calculating machine for scratch pad work, data storage, and side calculations. Two calculators are better than one.

Standard 10-key keyboard. If there is an easier way to enter data into a machine, no one has discovered it yet. And you can clear an incorrect entry without disturbing any completed work.

A complete adding and calculating machine for main calculations. The results of calculations in the main register are not affected by any other operation.

WANG

Programming a WANG Series 100 combines simplicity and efficiency

Wang, developer of punched card programming for calculators, has refined its technique for the Series 100. Series 100 program cards require no complicated computer language for preparation, are re-usable, cost almost nothing to replace and represent the most compact and easy-to-file program storage device.

Each program card for the Series 100 Programmer holds up to 60 two-step commands.

FOR EXAMPLE

To multiply the contents of the "W" register times the contents of register 9 requires only a single program step:

MULTIPLY REG 9

You can attach one or two programmers to every Series 100 calculator – up to 120 two-step commands. The simplicity of card programming and the unique efficiency built into Series 100 programmers make the Wang Series 100 unequalled for programming versatility.

MODEL AND OPTION SELECTION GUIDE

Check those features you consider critical for your work; you will quickly find the particular 100 model that will fulfill your requirements.

Model 132*	Model 134*	Model 152†	Model 154†		
●	●	●	●	☐	Main work reg. and separate scratch pad reg. with +, –, X, ÷, Store, Recall and Total
●		●		☐	4 additional work reg. each with +, –, X, ÷
	●		●	☐	12 additional work reg. each with +, –, X, ÷
●	●	●	●	☐	Product, entry accumulation and item counter
●	●	●	●	☐	$ and ¢ roundoff
●	●	●	●	☐	Preset decimal or floating point mode
●	●	●	●	☐	Implied two decimal point entry of data when desired
●	●	●	●	☐	Built-in line printer which operates at 3 lines per second
●	●	●	●	☐	Full twelve digit accuracy
●	●	●	●	☐	Auto underflow to always show maximum significant figures
●	●	●	●	☐	Single keys for instant reciprocal, integer, $\sqrt{X}$, and X^2
		●	●	☐	Single keys for instant absolute value, π, LnX, e^x
●	●	●	●	☐	Optional programming
		●	●	☐	Optional single keystroke Sin, Cos, Sin^{-1}, Tan^{-1}
			●	☐	Optional single keystroke deg → rad, rad → deg, a^x, ΣX^2, ΣX, ΣN, X and ÷ constant
●	●			☐	Optional single keystroke for ΣX^2, ΣX, ΣN, X and ÷ constant

*STATISTICAL †ENGINEERING–SCIENTIFIC

Because WANG is more than just a calculator company...

you get more than just a delivery. You get attention no other manufacturer offers, for example:

- The experience of assisting nearly 100,000 technical people like yourself and the resulting knowledge of what you need in a calculating instrument.
- The full services and assistance of the Wang world-wide organization wherever you go with your Wang product.
- An extensive program library, abstracts as new programs are developed, the full support of the Wang programming staff and field programming assistance.
- A free subscription to THE PROGRAMMER, our monthly magazine showing application notes and programs to help you get the maximum beneficial use from your Wang product.

Contact your local Wang office and our experienced problem analysts will gladly discuss your requirements and recommend the optimum unit for your greatest benefits.

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WANG

Yes, I want to know more about your "more than a calculator" Series 100.

☐ Have a Wang problem analyst contact me to discuss my application.

☐ Please send information.

Name_____ Title_____

Organization_____

Division_____

Address_____

City_____ State_____ Zip_____

Telephone_____

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Telephone_____

SAMPLE CALCULATIONS AND PRINTOUT

Series 100 calculators automatically print function, number operated upon, and register used — providing you with a permanent copy to validate entries and record results.

$A = \pi r^2$; r = 5.75

```
5.750000000000   *  X²
33.062500000000  = W
33.062500000000  ST R
33.062500000000  *  π
3.141592653580   = W
3.141592653580   X R
103.868907110    = R
```

Index 5.75 and depress X^2. The 100 automatically validates entry and records correct operation.

Store the answer in work register R — the 100 tells you where your intermediate answers are located.

Index π with 12 digit accuracy by a single keystroke.

Multiply directly in the work register — eliminating Store-Recall data manipulation steps.

A permanent record of your results.

```
256.000000000    *  LN
5.545177444447   = V
5.545177444447   ST R
8.000000000000   ÷ R
.693147180560    = R
.693147180560    *  e
2.000000000000   = W
```

Find $\sqrt[8]{256}$ using only 4 function keys.

```
67895438.98      ST R
    67548.89     X R
4586261539 20    = R
```

Should you exceed the 12 digit capacity, Series 100 calculators print the maximum number of significant digits and an overflow indicator.

SERIES 100 SPECIFICATIONS

Logic	TTL, DTL, Small and Medium Scale Integration
Memory	MOS 512 to 1024 Bits
Add Time	7.8 ms
Read/Write Cycle	3 us
Multiply/Divide Time	475 ms maximum 400 ms average
Register Capacity	12 digits, decimal, sign. Internal capacity always floating
Decimal Settings	Floating; 0, 2, 3, 6, 9 places. Penny Mode (implied two decimals)
Roundoff	0 places ($ roundoff) or 2 places (¢ roundoff)
Power Supply	50-60 Hz; 110 or 220 Volts
Size	12" wide 18 3/8" deep 7 3/8" high (printing)

Wang Laboratories, Inc. reserves the right to change specifications without notice.

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